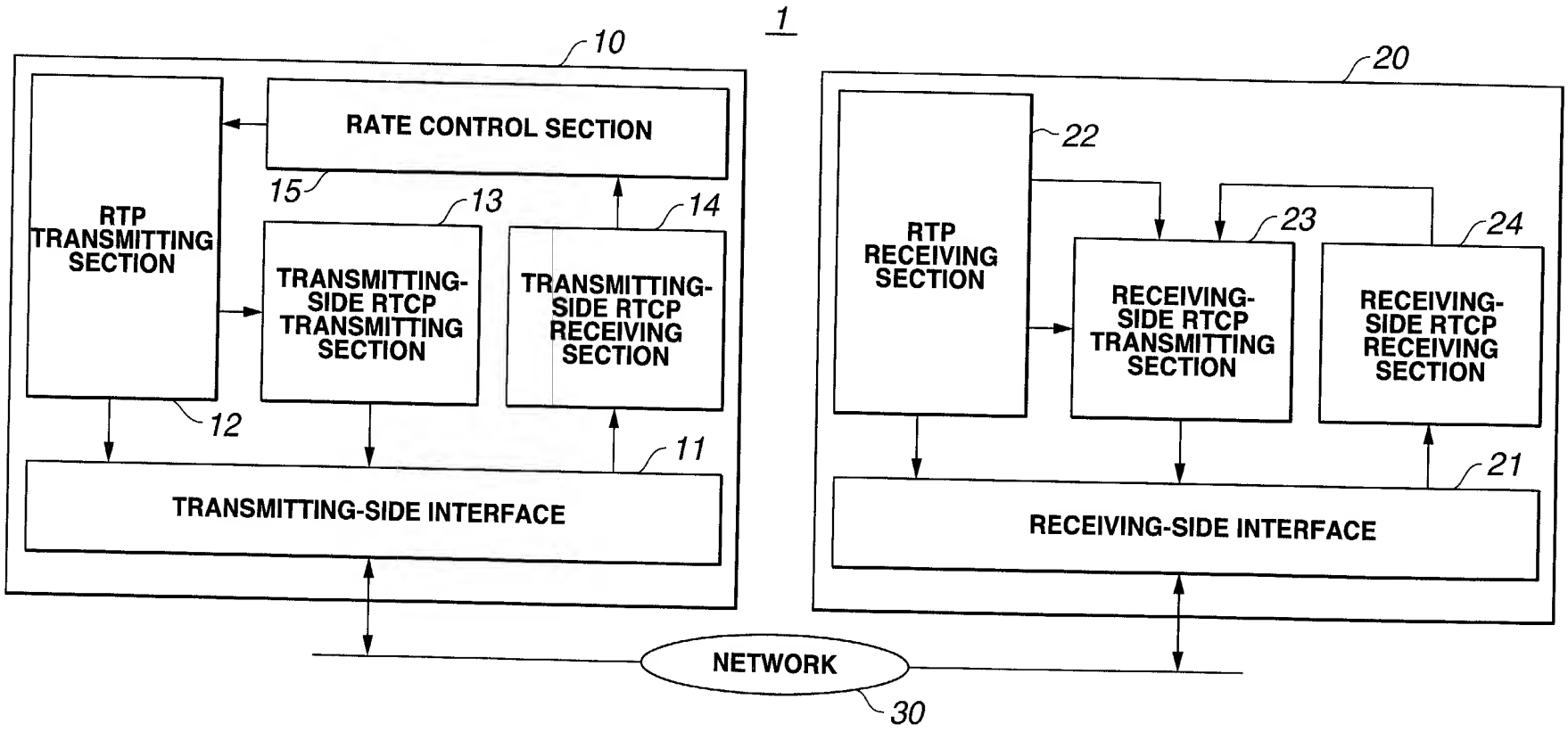
1
10
RATE CONTROL SECTION
15
RTP TRANSMITTING SECTION
13
TRANSMITTING-SIDE RTCP TRANSMITTING SECTION
14
TRANSMITTING-SIDE RTCP RECEIVING SECTION
12
11
TRANSMITTING-SIDE INTERFACE
20
22
RTP RECEIVING SECTION
23
RECEIVING-SIDE RTCP TRANSMITTING SECTION
24
RECEIVING-SIDE RTCP RECEIVING SECTION
21
RECEIVING-SIDE INTERFACE
NETWORK
30

FIG.1

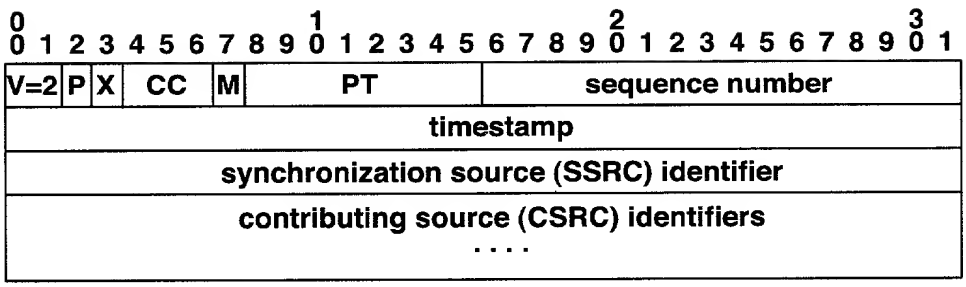
0 1 2 3
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
V=2
P
X
CC
M
PT
sequence number
timestamp
synchronization source (SSRC) identifier
contributing source (CSRC) identifiers
....

FIG.2

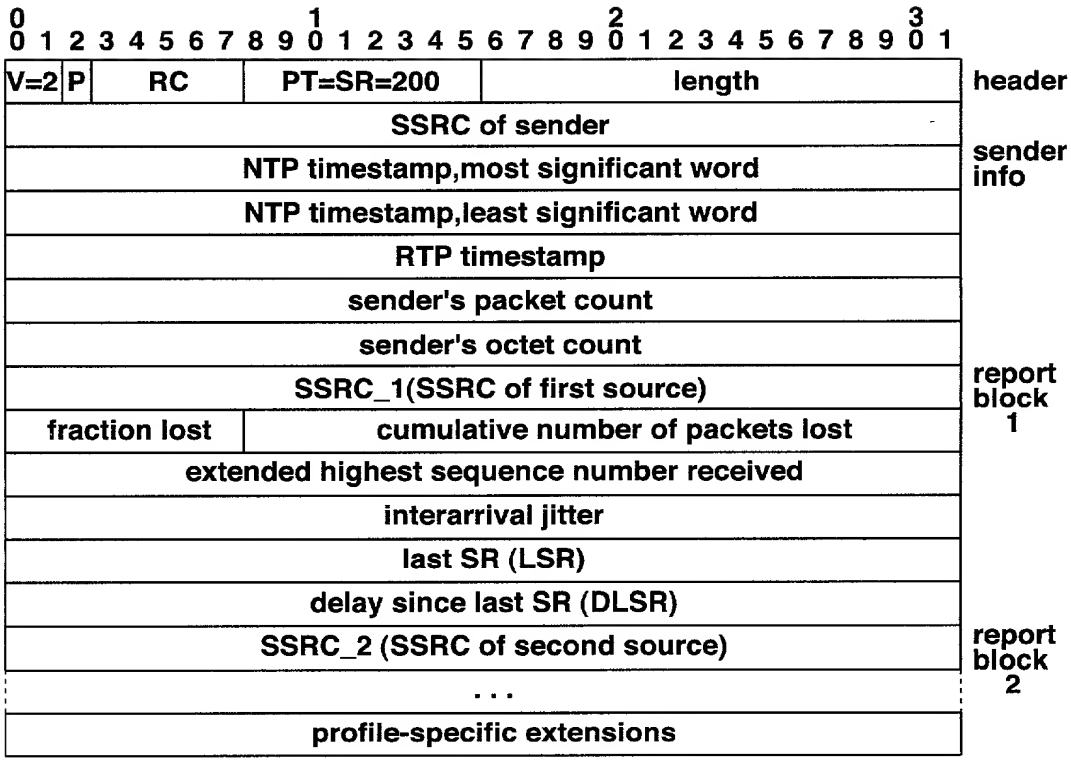
0 1 2 3
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
V=2
P
RC
PT=SR=200
length
header
SSRC of sender
sender info
NTP timestamp,most significant word
NTP timestamp,least significant word
RTP timestamp
sender's packet count
sender's octet count
SSRC_1(SSRC of first source)
report block 1
fraction lost
cumulative number of packets lost
extended highest sequence number received
interarrival jitter
last SR (LSR)
delay since last SR (DLSR)
SSRC_2 (SSRC of second source)
report block 2
. . .
profile-specific extensions

FIG.3

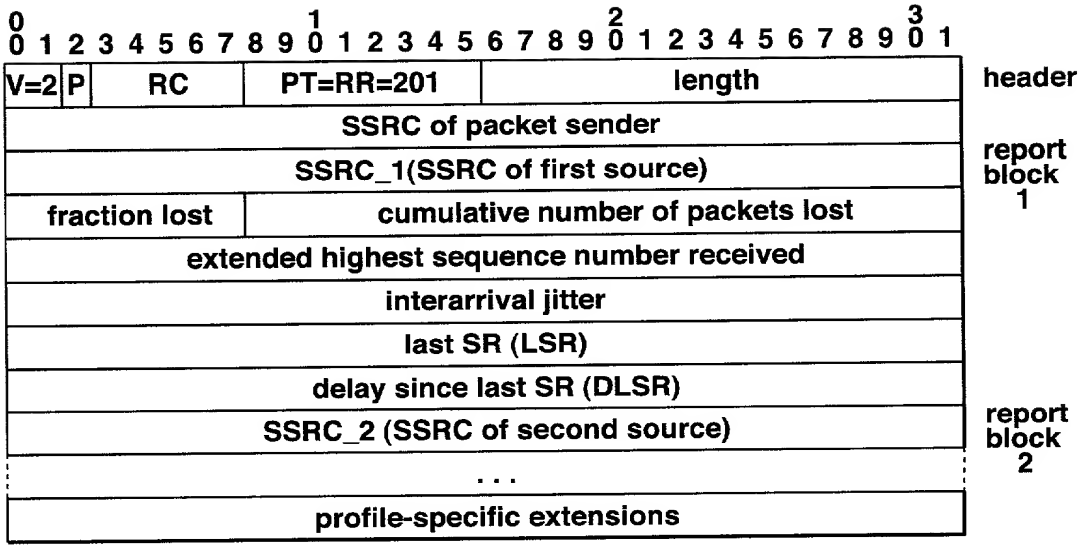
0 1 2 3 4 5 6 7 8 9 10 1 2 3 4 5 6 7 8 9 20 1 2 3 4 5 6 7 8 9 30 1
V=2
P
RC
PT=RR=201
length
header
SSRC of packet sender
SSRC_1(SSRC of first source)
fraction lost
cumulative number of packets lost
report block 1
extended highest sequence number received
interarrival jitter
last SR (LSR)
delay since last SR (DLSR)
SSRC_2 (SSRC of second source)
report block 2
. . .
profile-specific extensions

FIG.4

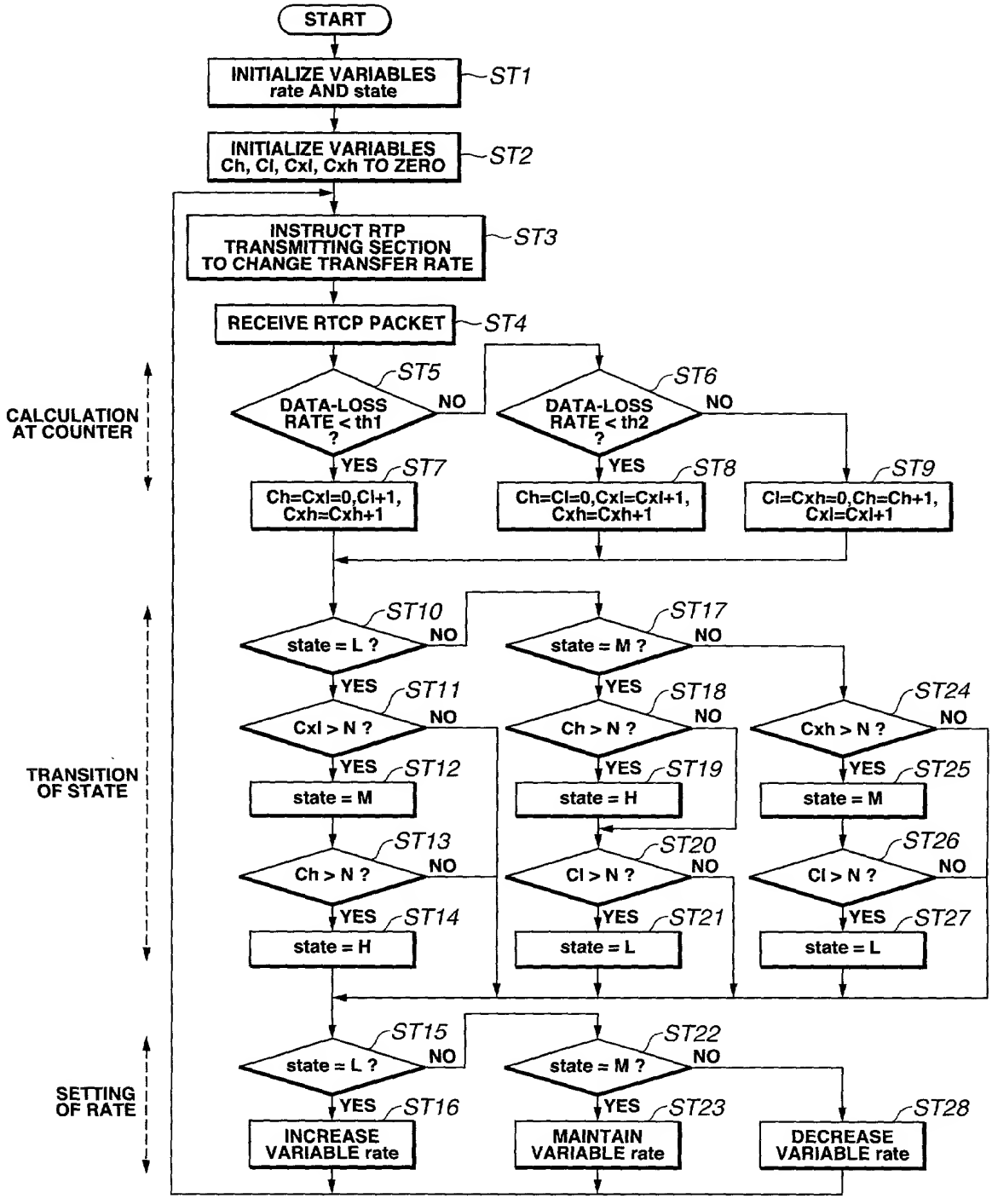
START
INITIALIZE VARIABLES rate AND state
ST1
INITIALIZE VARIABLES Ch, Cl, Cxl, Cxh TO ZERO
ST2
INSTRUCT RTP TRANSMITTING SECTION TO CHANGE TRANSFER RATE
ST3
RECEIVE RTCP PACKET
ST4
CALCULATION AT COUNTER
ST5
DATA-LOSS RATE < th1 ?
NO
YES
ST6
DATA-LOSS RATE < th2 ?
NO
YES
ST7
Ch=Cxl=0,Cl+1, Cxh=Cxh+1
ST8
Ch=Cl=0,Cxl=Cxl+1, Cxh=Cxh+1
ST9
Cl=Cxh=0,Ch=Ch+1, Cxl=Cxl+1
TRANSITION OF STATE
ST10
state = L ?
NO
YES
ST17
state = M ?
NO
YES
ST11
Cxl > N ?
NO
YES
ST18
Ch > N ?
NO
YES
ST24
Cxh > N ?
NO
YES
ST12
state = M
ST19
state = H
ST25
state = M
ST13
Ch > N ?
NO
YES
ST20
Cl > N ?
NO
YES
ST26
Cl > N ?
NO
YES
ST14
state = H
ST21
state = L
ST27
state = L
SETTING OF RATE
ST15
state = L ?
NO
YES
ST22
state = M ?
NO
YES
ST16
INCREASE VARIABLE rate
ST23
MAINTAIN VARIABLE rate
ST28
DECREASE VARIABLE rate

FIG.5

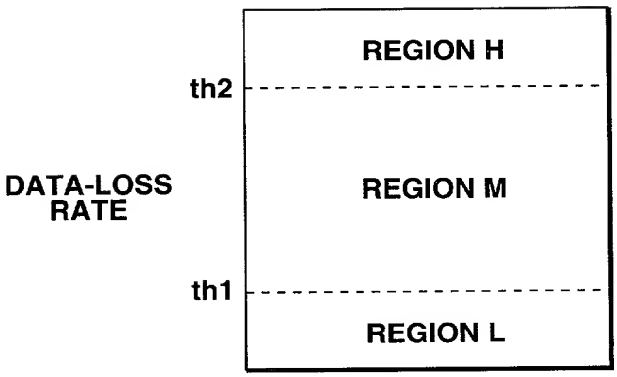

FIG.6